paint the bottom with a compound formed of marine glue, and the ordinary proportion of arsenic.

Another rather important objection to iron vessels is, that they are liable to break in the middle, and a long list of steamers could be named that have cracked in that part, and some of them have foundered. This has arisen not from the direct tearing of the iron, but from its buckling in a sea way, and it has been rent by bending it first to one side, then the other, just in the manner pursued in breaking a piece of tin. The remedy for this evil is good strong keelsons, good stringers, and a strong wide iron covering board running entirely round the ship, and stretched for several feet in width between the main deck. It is also a good plan to have diagonal plates running between the main deck and the beams. G. J. RHODES.

Miscellanea.

INSTITUTION OF MECHANICAL ENGINEERS, BIRMINGHAM. — At the general meeting, already mentioned by us, Mr. Robert Stephenson, on taking the chair, said, it was necessary that he should express to them how apprehensive he was—at least that he had apprehensions—of an institution of that kind failing for want of energy on the part of its members. What had hitherto been the character of almost every institution of this kind in this country? almost universal failure. It was a remarkable circumstance, that in a country like Great Britain, whose wealth and power are so closely connected with the development of the mechanical arts and sciences—it appeared to him, in fact, a complete anomaly—that institutions of that kind should not appear to reach a higher standard than they now had. They saw astronomers cultivate and maintain a society for extending their knowledge of the movements of the heavens. They saw geologists maintaining and extending societies for investigating and developing the structure of the earth. They saw physiologists and botanists maintaining and extending their societies for investigating and developing the knowledge of the animal and vegetable productions of the earth: yet they had witnessed only languidness and inactivity in the pursuit of those arts and sciences on which the nation's wealth absolutely depended. That it should be the case was to him the more remarkable, because the nation stood pre-eminent for their mechanical abilities. It was not egotistical in him to say this in Britain, because all foreigners conceded to them an unmeasured pre-eminence in those particular arts. Without despairing therefore of the success of the institution, he felt that in undertaking the task he was now doing, it was necessary that he should impress upon the members the absolute necessity of co-operating with him with energy in the further development of the institution. With that strong conviction on his mind, he wished also strongly to impress it on them; for without energy and industry they must fail as heretofore.

YORKSHIRE ARCHITECTURAL SOCIETY.—A special meeting of this society was held on Monday last, at Methley, for the purpose of examining the church of this village, which is now in the course of restoration. A fine oak roof over the nave, which had been discovered during the progress of the works, concealed above a flat plaster ceiling, excited admiration, and several other features of the church were considered as singular and interesting.

BRIDGWATER CHURCH COMPETITION.—Sir: Will you permit me to explain to "A Great Western," that the advertisement for an extension of time for receiving plans for the restoration of the above church was forwarded by me to your office, on the 26th ult., for insertion in THE BUILDER of April 28th; its non-insertion is for the publisher to explain. I trust your correspondent, after this explanation, will be assured that its non-insertion at the proper time was not for the purpose, as he insinuates, "to advantage some favoured individual."—H. C. HEARD. Bridgewater, May 15.

*** The advertisement in question, dated 26th, did not reach the publisher till after the publication of the paper on the 27th. THE BUILDER, it should be remembered, is published early on *Friday* morning.

TRADE IN BIRMINGHAM AND LIVERPOOL.—The prospects here, says the *Birmingham Journal*, "are not so cheering as previous to Christmas. The diminished duty on glass caused such an increased make as inundated the market, and it remains so glutted, that the demand, at the manufacturers, even at low prices, is very limited. Low prices alone will not bring an article like glass into universal use at once. We require to be educated to perceive its advantages. Hence the mistake. With respect to the general ironmongery business, our reports are more favourable; nor do we believe all we hear, that, notwithstanding the low price at which it is said the Germans can manufacture tools (such as files, vices, nippers, &c.), any quantity of foreign make has yet found its way, or can find it, into the markets of this country. We are aware that pattern cards of German manufactures are in circulation in Birmingham, and that after paying an import duty of about 10 per cent., the brokers and their agents profess to supply English dealers and consumers with articles of equal quality, at 40 per cent. less than the articles in question are now made by the British manufacturers. The artisans of Birmingham dispute these assertions, and it would be strange if, while Stubb's files bring high prices on the continent, German manufactures should supersede them in England." At Liverpool, the disorganized state of the continent affects unfavourably the market for timber. Prices, however, since 1st instant, continue without much change. During the week two cargoes of St. John's spruce deals have been sold on the quay at 7*l.* 15s. and 7*l.* 10s. per standard. By auction, 14,964 St. John's spruce deals and battens, &c., at from 7*l.* 10s. to 8*l.* 5s. per standard; 2,665 St. Stephen's spruce deals, at from 7*l.* 17s. 6d. to 8*l.* 2s. 6d. per standard; 378 Quebec, third quality, inferior pine deals, at 7*l.* 17s. 6d. per standard; 300 logs St. John's pine, averaging 19½ inches calliper, at 18d. per foot, and 50 logs at 18½d. per foot; 28 logs elm, at 16½d. per foot; 35 logs ash, at 14d. per foot, 78 logs oak, at 1s. 8d. to 2s. per foot; 110 logs Savannah pitch pine, at from 2s. 1d. to 2s. 4½d. per foot; planks ditto, 3½d. to 3¾d. per foot 2 inches. Iron continues dull of sale, and a further decline to a small extent has to be reported. For common bars 6*l.* is now the highest obtainable rate; whilst for cargoes in Wales, the rates are nominal, with a wide range from 5*l.* 15s. to 5*l.* 7s. 6d. Copper is steady and in fair demand."

SILVERING GLASS BY AID OF GUN-COTTON.—M. Vohl has recently discovered that a solution of gun-cotton, in a caustic ley, possesses, in a high degree, the property of precipitating silver from its solutions in the metallic form. On pouring into it a few drops of a solution of nitrate of silver, and adding ammonia until the oxide of silver formed is redissolved (the mixture being slowly heated in a water bath), the liquor will, at a certain period, assume a deep brown colour, and effervesce, the whole of the silver being precipitated on the sides of the vessel. The mirror thus produced is much superior in brilliancy to those produced by means of etherial oils or ammoniacal aldehyde; and the facility with which it is produced will doubtless render it of practical importance.—*Technologiste.*

OUR 'WOODEN WALLS' IN DANGER.—On Monday evening, there was a considerable concourse of persons on Tyne Bridge, and on the shores of the river, to witness a race between an ordinary wooden skiff, or gig, and one made of *gutta percha*, 26 feet long by 3 broad. When first we caught sight of the competitors struggling for the goal, '*Gutta Percha*' was several lengths in advance, and she kept her 'proud position' to the end. Our old 'wooden walls' were thus defeated by an innovation in nautical architecture, built of a mongrel material, half leather, half India rubber. What with a reverse like this, following upon the use of iron in shipbuilding, our good old English 'heart of oak' may well be heart-broken. Mr. Taylor, having won the boat race, next made trial of a *gutta percha* 'life buoy.' A lad, who had consented to have his life saved and his clothes spoiled, jumped into the river in 'full dress,' and was rescued, as we understand, by the buoy.—*Gateshead Observer.*

ARCHITECTURAL AND ARCHÆOLOGICAL MEETING.—The spring union-meeting of the Northampton and Bedfordshire Societies was held at the Town Hall, Higham Ferrers, on Tuesday week, the Rev. Sir George Robinson in the chair, in place of the Marquis of Northampton, who was indisposed. The Rev. H. Rose, rector of Brington, read a paper "On the Chicheley days of Higham Ferrers," and one, by Lord Alwyne Compton, "On encaustic tiles." The Rev. H. J. Rose, rector of Houghton Conquest, then read a paper "On Hebrew shekels, and on some architectural devices found in coins."—Mr. Matthew H. Bloxam, one "On an ancient stone offertory box in Bridlington Church, Yorkshire, and on an ancient stone offertory basin in East Kirby Church, Lincolnshire;" and Mr. G. G. Scott another, "On the principles of church restoration:" in the course of which he made some remarks upon the injudicious manner in which some attempts at restoration had been made. In these attempts more had been done to obliterate good examples than if they had been left in the mutilated condition in which the "restorer" found them. Sometimes well-meaning, but crotchetty individuals would take upon themselves to alter that which was old, because it did not suit their taste, and so destroyed the authenticity of the work; and many had destroyed portions of really choice works of art to make room for their own. Against such "restoration" as this he vehemently protested. This style of thing must be prevented, or much mischief would be done even under good intentions. The great danger was in doing too much, and it required some considerable skill to tell where to stop. On the following morning an excursion was made to some of the neighbouring churches.

FOUNTAINS ABBEY.—The excavations of the site of the Abbot's house at Fountains Abbey are proceeding very satisfactorily. The arches on which the house has been built cover the river for nearly 300 feet; but how far the building has extended north and south it is at present impossible to say. According to the *Times*, the most interesting apartment brought to light within the last week or two is the private oratory of the Abbot, near the eastern portion of the remains. It has been an elegant little chapel, of a style of architecture different from any hitherto noticed at Fountains, viz., the dog-toothed Early English, and has been, no doubt, as Mr. Walbran, of Ripon, states, the work of an immediate successor of the three Johns, some time between 1245 and 1290.

BRITISH ARCHÆOLOGICAL ASSOCIATION.—The congress will be opened at Chester on the 30th of July. An influential local committee has been formed.

THE DUNDEE ARCH COMPETITION.—Can you afford me any information relative to the Dundee Arch Competition?—for from Dundee itself I can obtain none. Understanding that a design had been selected, and not receiving back the one that I had sent in, I wrote to request that it might be returned to me. Not obtaining either my drawings or any reply, after waiting about a fortnight, I wrote again in somewhat peremptory terms, but without any better success. Another competitor has experienced just the same treatment, or even worse, for he has written no fewer than four times, yet has not been able to obtain a single syllable in reply!—which is surely highly monstrous. There ought to be no occasion for writing at all, but designs ought to be returned to the respective competitors as matter of course. The only reason there can possibly be for detaining them is that the Committee have, like that of the Army and Navy Clubhouse, rescinded their first decision, viz., that in favour of a Norman Arch, and not yet come to any other. Yet if such be really the case, wherefore, in the name of common sense, is not such reason assigned, in answer to the first inquiry. Neither common sense, however, nor common decency, seems to be regarded on such occasions.

COMPETITOR.

*** To this question, put also by five other correspondents, we are unable to reply. The competitors have just reason to complain of want of courtesy: we hope the cause of complaint may be confined to this.

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